

## ABSTRACT

A system for transplant production comprising: at least one air conditioner installed in a completely light shielding closed structure surrounded by a thermally insulated wall, the air conditioner controlling the temperature and humidity of air in the closed structure; at least one box-shaped culturing module disposed in the internal space of the closed structure, the culturing module having a front face opening which is opened to the internal space of the closed structure; a plurality of transplant production shelves arranged vertically in multi-layer in the culturing module to form a transplant production space between the upper and lower transplant production shelves; a plurality of plug trays for holding a plant growing medium mounted on each transplant production shelf; a sub-irrigation unit capable of irrigation from the bottom of the plug trays mounted on each transplant production shelf; an artificial lighting unit provided on the back of each transplant production shelf, the artificial lighting unit irradiating light to the lower plug trays; and at least one air fan fixed to the back wall of each transplant production shelf of the culturing module.

By sucking the air whose temperature and humidity have been controlled by the air conditioner using the air fan from the front face opening of the culturing module and sending the air to the rear of the back wall of each transplant production shelf, temperature-controlled and humidity-controlled air can be effectively generated.